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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RAMOS FELICIANO, ELISEO

ART UNIT PAPER NUMBER

2687

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,816

Applicant(s)

SRIRAM, SUNDARARAJAN

Examiner

Eliseo Ramos-Feliciano

Art Unit

2687

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 13-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>JUN/23/2003</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The references listed in the Information Disclosure Statement filed on June 26, 2003 have been considered by the examiner (see attached PTO-1449 or PTO/SB/08A and 08B forms).

Claim Objections

2. **Claims 1 and 13** are objected to because of the following informalities: line 3 (as amended by preliminary amendment filed June 26, 2003) recite "adjacent another", should be -- adjacent to another--. Appropriate correction is required.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Issue I: U.S. Patent No. 6,665,277

4. **Claims 1-5 and 13-17** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims (applied below) of U.S. Patent No. 6,665,277 (simply "6,665,277" hereinbelow). Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following.

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Regarding **claim 1**, claim 1 of U.S. Patent No. 6,665,277 discloses a method, comprising the steps of:

- receiving a frame of data having a predetermined number of time slots, each time slot being adjacent another time slot (column 6, lines 29-31);
- receiving a plurality of data symbols in each respective time slot (column 6, lines 33-34); and
- receiving each of a primary, a secondary and a tertiary synchronization code over respective adjacent channels in each said predetermined number of time slots (column 6, lines 35-37).

In addition, claim 1 of 6,665,277 is more specific than claim 1 of present application. Conflicting claims in the instant application are not patentably distinct because conflicting claims are broader and generic with respect to the applied reference claims, i.e., an obvious variation. Many decisions support the fact that a broad or generic claim is obvious from a specific claim, i.e., an obvious variation. See *In re Van Ornum and Stang*, 214 USPQ 761 (CCPA 1982); *In re Goodman* (CA FC) 29 USPQ2d 2010 (12/3/1993); *In re Vogel and Vogel*, 164 USPQ 619 (CCPA 1970); *In re Berg* (CA FC) 46 USPQ2d 1226 (3/30/1998); *Eli Lilly and Co. v. Barr Laboratories Inc.*, 58 USPQ2d 1865 (CA FC 2001). It is well settled that omission of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before. This notion is supported by *In re KARLSON*, 136 USPQ 184 (1963); *In re Nelson*, 95 USPQ 82 (CCPA 1952); and *In re Eliot*, 25 USPQ 111 (CCPA 1935).

Regarding **claims 2-5**, claim 1 of 6,665,277 discloses everything claimed as applied above. In addition, claims 3-6 of 6,665,277, respectively, disclose every single feature further claimed (see column 6, line 64 to column 7, line 8).

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Regarding **claim 13**, claim 8 of U.S. Patent No. 6,665,277 discloses a method, comprising the steps of:

- transmitting a frame of data having a predetermined number of time slots, each time slot being adjacent another time slot (col. 7, lines 23-24);
- transmitting a plurality of data symbols in each of said time slots (col. 7, lines 26-27); and
- transmitting a primary, a secondary and a tertiary synchronization code over respective adjacent channels in each of said time slots (col. 7, lines 28-30).

In addition, claim 8 of 6,665,277 is more specific than claim 13 of present application. Conflicting claims in the instant application are not patentably distinct because conflicting claims are broader and generic with respect to the applied reference claims, i.e., an obvious variation. Many decisions support the fact that a broad or generic claim is obvious from a specific claim, i.e., an obvious variation. See *In re Van Ornum and Stang*, 214 USPQ 761 (CCPA 1982); *In re Goodman* (CA FC) 29 USPQ2d 2010 (12/3/1993); *In re Vogel and Vogel*, 164 USPQ 619 (CCPA 1970); *In re Berg* (CA FC) 46 USPQ2d 1226 (3/30/1998); *Eli Lilly and Co. v. Barr Laboratories Inc.*, 58 USPQ2d 1865 (CA FC 2001). It is well settled that omission of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before. This notion is supported by *In re KARLSON*, 136 USPQ 184 (1963); *In re Nelson*, 95 USPQ 82 (CCPA 1952); and *In re Eliot*, 25 USPQ 111 (CCPA 1935).

Regarding **claims 14-17**, claim 8 of 6,665,277 discloses everything claimed as applied above. However, it fails to specify the further steps required by claims 14-17 of present application.

Claim 9 of 6,665,277 teaches an analogous method to the one of claim 8 of 6,665,277.

Claims 10-13 of 6,665,277, respectively, disclose every single feature further claimed by claims 14-17 of present application (see column 8, lines 16-27).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify claim 8 of 6,665,277 with the teachings of claims 10-13 of 6,665,277, respectively, to include the further steps required by claims 14-17 of present application because they are suggested by the same set of claims of U.S. Patent No. 6,665,277.

Issue II: copending Application No. 10/658,902

5. **Claims 1-5 and 13-17** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of copending Application No. 10/658,902 (simply “10/658,902” hereinbelow). Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following.

Regarding **claim 1**, claim 1 of copending Application No. 10/658,902 discloses a method, comprising the steps of:

- receiving a frame of data having a predetermined number of time slots, each time slot being adjacent another time slot;
- receiving a plurality of data symbols in each respective time slot; and
- receiving each of a primary, a secondary and a tertiary synchronization code over respective adjacent channels in each said predetermined number of time slots.

Conflicting claims in the instant application are not patentably distinct because conflicting claims are broader and generic with respect to the applied reference claims, i.e., an

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obvious variation. Many decisions support the fact that a broad or generic claim is obvious from a specific claim, i.e., an obvious variation. See *In re Van Ornum and Stang*, 214 USPQ 761 (CCPA 1982); *In re Goodman* (CA FC) 29 USPQ2d 2010 (12/3/1993); *In re Vogel and Vogel*, 164 USPQ 619 (CCPA 1970); *In re Berg* (CA FC) 46 USPQ2d 1226 (3/30/1998); *Eli Lilly and Co. v. Barr Laboratories Inc.*, 58 USPQ2d 1865 (CA FC 2001). It is well settled that omission of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before. This notion is supported by *In re KARLSON*, 136 USPQ 184 (1963); *In re Nelson*, 95 USPQ 82 (CCPA 1952); and *In re Eliot*, 25 USPQ 111 (CCPA 1935).

Regarding **claims 2-5**, claim 1 of 10/658,902 discloses everything claimed as applied above. In addition, claims 2-5 of 10/658,902, respectively, disclose every single feature further claimed.

Regarding **claim 13**, claim 13 of copending Application No. 10/658,902 discloses a method, comprising the steps of:

- transmitting a frame of data having a predetermined number of time slots, each time slot being adjacent another time slot;
- transmitting a plurality of data symbols in each of said time slots; and
- transmitting a primary, a secondary and a tertiary synchronization code over respective adjacent channels in each of said time slots.

Conflicting claims in the instant application are not patentably distinct because conflicting claims are broader and generic with respect to the applied reference claims, i.e., an obvious variation. Many decisions support the fact that a broad or generic claim is obvious from

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a specific claim, i.e., an obvious variation. See *In re Van Ornum and Stang*, 214 USPQ 761 (CCPA 1982); *In re Goodman* (CA FC) 29 USPQ2d 2010 (12/3/1993); *In re Vogel and Vogel*, 164 USPQ 619 (CCPA 1970); *In re Berg* (CA FC) 46 USPQ2d 1226 (3/30/1998); *Eli Lilly and Co. v. Barr Laboratories Inc.*, 58 USPQ2d 1865 (CA FC 2001). It is well settled that omission of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before. This notion is supported by *In re KARLSON*, 136 USPQ 184 (1963); *In re Nelson*, 95 USPQ 82 (CCPA 1952); and *In re Eliot*, 25 USPQ 111 (CCPA 1935).

Regarding **claims 14-17**, claim 13 of 10/658,902 discloses everything claimed as applied above. In addition, claims 14-17 of 10/658,902, respectively, disclose every single feature further claimed.

6. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. **Claims 1-4 and 13-16** are rejected under 35 U.S.C. 102(e) as being anticipated by Nyström et al. (US Patent Number 6,185,244).

Regarding **claim 1**, Nyström et al. discloses a method including the steps of:

receiving a frame (Figure 16) of data having a predetermined number of time slots (Slot 0 to Slot 15 – Figure 16), each time slot being adjacent another time slot (for example, Slot 0 is adjacent to Slot 1, etc.);

receiving a plurality of data symbols (column 12, lines 14-15; column 2, line 3) in each respective time slot; and

receiving each of a primary (STI), a secondary (LCI) and a tertiary (FTI) synchronization code over respective adjacent channels in each said predetermined number of time slots (Figure 18).

For clarity, to further facilitate understanding of the present rejection, should be noted that the primary (STI), a secondary (LCI) and a tertiary (FTI) synchronization codes are included in Nyström et al.'s PSC and SSC (as depicted in Figure 18), which in turn are included in each time slot (column 12, line 10-12). The PSC and SSC are separate of other chips (data symbols as claimed – column 2, line 3) also included in each time slot (column 12, lines 14-15). The same frame that is transmitted (column 7, lines 13-20) is also received by a receiver (column 7, lines 21-27). Therefore, Nyström et al. discloses both receiving and corresponding transmitting steps.

Regarding **claims 2 and 3**, Nyström et al. discloses everything claimed as applied above (see *claim 1*). In addition, Nyström et al. discloses that the secondary (LCI) and the tertiary (FTI) synchronization codes identify a subset of codes (valid sequences); the secondary (LCI) and tertiary (FTI) synchronization codes are formed from a predetermined order (binary) of synchronization code elements (bits), the predetermined order corresponding to the subset of codes (valid sequences). See column 12, lines 28-51.

For clarity, to further facilitate understanding of the present rejection, the secondary (LCI) and a tertiary (FTI) synchronization codes are contained in the SSC. I.e., the SSC includes the combination of “the secondary and the tertiary synchronization codes” which in turn perform the same functions as claimed.

Regarding **claim 4**, Nyström et al. discloses everything claimed as applied above (see *claim 1*). In addition, Nyström et al. discloses that the secondary (LCI) and tertiary (FTI) synchronization codes are formed from a predetermined order (binary) of common synchronization code elements (bits). See column 12, lines 28-51.

For clarity, to further facilitate understanding of the present rejection, the secondary (LCI) and a tertiary (FTI) synchronization codes are contained in the SSC. I.e., the SSC includes the combination of “the secondary and the tertiary synchronization codes” which in turn perform the same functions as claimed. In addition, binary order by definition (inherently) includes two types of code elements (bits) which are common; therefore, “common synchronization code elements” is met by Nyström et al. as claimed.

Regarding **claim 13**, Nyström et al. discloses a method including the steps of:

transmitting a frame (Figure 16) of data having a predetermined number of time slots (Slot 0 to Slot 15 – Figure 16), each time slot being adjacent another time slot (for example, Slot 0 is adjacent to Slot 1, etc.);

transmitting a plurality of data symbols (column 12, lines 14-15; column 2, line 3) in each of said time slots; and

transmitting a primary (STI), a secondary (LCI) and a tertiary (FTI) synchronization code over respective adjacent channels in each of said time slots (Figure 18).

For clarity, to further facilitate understanding of the present rejection, should be noted that the primary (STI), a secondary (LCI) and a tertiary (FTI) synchronization codes are included in Nyström et al.'s PSC and SSC (as depicted in Figure 18), which in turn are included in each time slot (column 12, line 10-12). The PSC and SSC are separate of other chips (data symbols as claimed – column 2, line 3) also included in each time slot (column 12, lines 14-15). The same frame that is transmitted (column 7, lines 13-20) is also received by a receiver (column 7, lines 21-27). Therefore, Nyström et al. discloses both receiving and corresponding transmitting steps.

Regarding **claims 14 and 15**, Nyström et al. discloses everything claimed as applied above (see *claim 1*). In addition, Nyström et al. discloses that the secondary (LCI) and the tertiary (FTI) synchronization codes identify a subset of codes (valid sequences); the secondary (LCI) and tertiary (FTI) synchronization codes are formed from a predetermined order (binary) of synchronization code elements (bits), the predetermined order corresponding to the subset of codes (valid sequences). See column 12, lines 28-51.

For clarity, to further facilitate understanding of the present rejection, the secondary (LCI) and a tertiary (FTI) synchronization codes are contained in the SSC. I.e., the SSC includes the combination of “the secondary and the tertiary synchronization codes” which in turn perform the same functions as claimed.

Regarding **claim 16**, Nyström et al. discloses everything claimed as applied above (see *claim 1*). In addition, Nyström et al. discloses that the secondary (LCI) and tertiary (FTI) synchronization codes are formed from a predetermined order (binary) of common synchronization code elements (bits). See column 12, lines 28-51.

For clarity, to further facilitate understanding of the present rejection, the secondary (LCI) and a tertiary (FTI) synchronization codes are contained in the SSC. I.e., the SSC includes the combination of “the secondary and the tertiary synchronization codes” which in turn perform the same functions as claimed. In addition, binary order by definition (inherently) includes two types of code elements (bits) which are common; therefore, “common synchronization code elements” is met by Nyström et al. as claimed.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 5 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nyström et al. (US Patent Number 6,185,244).

Regarding **claim 5**, Nyström et al. discloses everything claimed as applied above (see *claim 1*). In addition, Nyström et al. teaches that the FTI (tertiary synchronization code) is used for frame timing by a mobile receiver. (Column 11, lines 58-63). However, Nyström et al. fails to teach that the mobile receiver identifies a first time slot of the frame by the FTI (tertiary synchronization code) in the same embodiment just explained.

In a separate embodiment, but still in the same field of endeavor, Nyström et al. teaches that with frame timing information the mobile receiver (mobile station) is able to locate the boundary of the frame, that is, a first time slot. (Column 4, lines 38-52).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Nyström et al. so that the a mobile receiver can identify the first time slot of the frame by the tertiary synchronization code, because such technique is suggested by the same Nyström et al. as explained above, and it provides for more reliable communications.

Regarding **claim 17**, Nyström et al. discloses everything claimed as applied above (see *claim 13*). In addition, Nyström et al. teaches that the FTI (tertiary synchronization code) is used for frame timing by a mobile receiver. (Column 11, lines 58-63). However, Nyström et al. fails to teach the tertiary synchronization code order corresponds to an order of time slots in the frame in the same embodiment just explained.

In a separate embodiment, but still in the same field of endeavor, Nyström et al. teaches that with frame timing information the mobile receiver (mobile station) is able to locate the boundary of the frame, which corresponds to an order of the time slots. (Column 4, lines 38-52).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Nyström et al. so that the tertiary synchronization code order corresponds to an order of time slots in the frame, because such technique is suggested by the same Nyström et al. as explained above, and it provides for more reliable communications.

Response to Arguments

11. Applicant's arguments (see Remarks section in preliminary amendment filed June 26, 2003) traversing a rejection in parent application 09/428,907 have been considered but are moot because they are directed to an independent application and prosecution is closed in that application.

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Conclusion

12. Any inquiry concerning this communication from the examiner should be directed to Eliseo Ramos-Feliciano whose telephone number is 571-272-7925. The examiner can normally be reached from 8:00 a.m. to 5:30 p.m. on 5-4/9 1st Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid, can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


9/15/05
ELISEO RAMOS-FELICIANO
PATENT EXAMINER

ERF/erf

September 15, 2005